

Application No. 09/636,286

RD-27791

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

1. (canceled)
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (canceled)
7. (canceled)
8. (canceled)
9. (canceled)
10. (canceled)
11. (canceled)
12. (canceled)
13. (canceled)
14. (canceled)
15. (canceled)
16. (canceled)

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17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (canceled)

27. (canceled)

28. (canceled)

29. (canceled)

30. (canceled)

31. (canceled)

32. (new) A method for forming an elongated fused quartz article comprising:

feeding a SiO_2 material into a furnace melting zone comprising a refractory material wall comprising tungsten, molybdenum or mixtures thereof with a protective lining selected from the group consisting of rhenium, osmium, iridium and mixtures thereof;

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feeding a gas mixture comprising at least (1) one inert carrier gas comprising a member selected from the group consisting of a hydrogen carrier gas and a noble carrier gas and (2) an oxidizing gas into the protectively lined furnace melting zone;

fusing the SiO_2 material in the protectively lined melting zone of the furnace in the presence of the gas mixture; and

drawing the fused SiO_2 material from the furnace to form the fused quartz article.

33. (new) The method of claim 32, wherein the oxidizing gas is water vapor or air.

34. (new) The method of claim 32, wherein the oxidizing gas is water vapor.

35. (new) The method of claim 32, wherein the oxidizing gas is air

36. (new) The method of claim 32, wherein the gas mixture comprises hydrogen with a dew point of greater than 50°C .

37. (new) The method of claim 32, wherein said protective lining comprises rhenium.

38. (new) The method of claim 32, comprising drawing a fused SiO_2 material having less than 10 ppb dissolved refractory metal content from the furnace.

39. (new) The method of claim 32, comprising drawing a fused SiO_2 material having less than 1 ppb dissolved refractory metal content from the furnace.

40. (new) The method of claim 32, comprising fusing the SiO_2 material at a temperature in excess of 2050°C .